

## Precision Balance 7

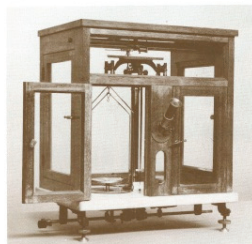


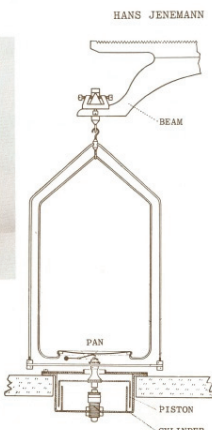
FIG 1. Bunge's aperiodic balance.

FIG 2. (right) Bunge's damping arrangement below the pan.

This short beam balance, Fig 1, was made by Paul Bunge's firm, c1925. It was designed for a maximum load of 200g and has a sensitivity of 0.1mg. Observation of the pointer deflection is by the microscope projecting from the front of the case. The 130mm beam is brass, coated with 'Zapon', an anti-corrosion lacquer. The top of the beam is straight

and extended at the ends to carry a rider weight. The rider travels the full length of the beam from 0 on the left to 100mg on the right, providing greater accuracy than other types which travelled over only half the beam length. Notches in the top of the beam provide accurate, and repeatable, location for the rider. The glass and mahogany case is 430mm high (16.9").

The balance is provided with air-damping to reduce the number of oscillations, and to speed-up weighing. Damping is produced by a cup-shaped piston, attached below each pan, moving inside a cylindrical box set into the base of the case, Fig 2. The piston never touches the side of the cylinder, but the gap between them is very small, so air escapes



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**Abstract**

**Remarks**